

In re Appln. of Saunders et al.
Corresponding to PCT/GB98/00469

and/or interconnections of the filaments and the signal connections to/from the filaments
being at a first end of each filament; and

the switch means being operable to selectively interconnect pairs of filaments
at a second end of those filaments remote from the first end.

*a*₃ 5. (Amended) An antenna according to claim 1 [any preceding claim],
including switch means associated with each filament for selectively altering the electrical
length and/or interconnections of the filaments and

each filament including at least a first filament section and a second filament
section; and

the switch means being operable to selectively connect or isolate the first and
second filament sections of each filament so as to vary the electrical length of that filament.

6. (Amended) An antenna according to claim 1 [any one of the preceding
claims], in which:

*a*₄ the detecting means is operable to detect a signal to noise ratio of a received
signal; and

the control means is operable to control the operation of the matching circuit
and/or the weighting circuit so as to improve the signal to noise ratio of the received signal.

*a*₅ 7. (Amended) An antenna according to claim 1 [any one of the preceding
claims], in which:

In re Appln. of Saunders et al.
Corresponding to PCT/GB98/00469

the detecting means is operable to detect a signal to (noise plus interference) ratio of a received signal; and

the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the signal to (noise plus interference) ratio of the received signal.

46
8. (Amended) An antenna according to claim 1 [any one of the preceding claims], in which:

the detecting means is operable to detect a signal level of a received signal;
and

the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the signal level of the received signal.

47
9. (Amended) An antenna according to claim 1 [any one of the preceding claims], in which:

the detecting means is operable to detect a VSWR for a transmitted signal;
and

the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the VSWR for transmission of that signal.

48
10. (Amended) An antenna according to claim 1 [any one of the preceding claims], in which the detecting means comprises:

analogue to digital conversion means for converting respective signals received by the filaments into corresponding digital representations

a memory for storing the digital representations;

means for combining the digital representations using respective phase relationships and gains; and

means for detecting properties of the antenna by analysis of the combined digital representations.

11. (Amended) An antenna according to [any one of claims] claim 1 [to 9], in which the detecting means comprises:

means for combining respective signals received by the filaments using respective phase relationships

analogue to digital conversion means for converting the combined signals into a corresponding digital representation;

a memory for storing the digital representation; and

means for detecting properties of the antenna by analysis of the combined digital representations.

13. An antenna according to claim 1 [any one of the preceding claims], in which the detecting means operates at least during reception of a reference signal burst by the antenna.

In re Appln. of Saunders et al.
Corresponding to PCT/GB98/00469

a₁₁ 14. An antenna according to claim 1 [any one of the preceding claims], in which
n is an even integer.

a₁₂ 15. An antenna according to claim 1 [any one of the preceding claims], in which
n is equal to 4 or 6.

a₁₃ 16. An antenna according to claim 1 [any one of the preceding claims], in which
the filaments are helically shaped.

a₁₄ 17. An antenna according to claim 1 [any one of the preceding claims], in which
the filaments are at least partially intertwined.

a₁₅ 18. An antenna according to claim 1 [any preceding claim], having a volute of
generally elliptical or rectangular axial cross-section.

a₁₆ 19. An antenna according to claim 1 [any preceding claim], wherein the
weighting circuit operates at baseband.

a₁₇ 20. An antenna according to [any of claims] claim 1 [to 18], wherein the
weighting circuit operates at RF.

Please cancel claim 23 without prejudice.